

together; lateral line on both sides much arched within the range of the pectoral fins, thence straight to the tail.

The upper side presents as a ground colour a mixture of various shades of light brown, with a round dark spot, 3 lines in diameter, commencing an inch from the tail; it is likewise marked with a very few smaller inconspicuous round dark-coloured spots, and blotched irregularly with very dark rich brown. The fins do not exhibit any round spots as shown in Dr. Fleming's figure (*Phil. of Zool.*, vol. i. pl. 3), but are all irregularly marked on the upper side with many different shades of brown; irides reddish-golden; under side of body white, with a very pale reddish tinge. In all characters not mentioned here this specimen accords with Mr. Jenyns's description (p. 462).

With Mr. Yarrell I agree in considering the *Rhombus unimaculatus* of Risso (*Hist. Nat. P'Eur. Mer.* t. iii. p. 252, f. 35) identical with this species. In the number of rays in the fins, individuals appear to differ considerably, but perhaps not more so than might be expected when so great is their number.

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*Mustelus lævis* and *Hinnulus*.—I embrace this opportunity of offering a few remarks on the identity of the *Squalus Mustelus*, Linn. (*Mustelus lævis*, Will.), and *Sq. Hinnulus*, Blain.\* (*Must. stellatus*, Risso). As some authors are agreed on this subject, it may perhaps be considered unnecessary to treat further of it, but I do so in reference to the place *S. Hinnulus* occupies in Mr. Jenyns's excellent 'Manual', p. 503. Here a short description is given of a fish taken at Weymouth, of which it is said that it "appears to be identical with the *S. Hinnulus* of Blainville;" afterwards the remark is made, "that it is a great question whether this last be anything more than a variety of *S. Mustelus*."

The following observations are on a specimen taken in Belfast bay on the 16th of July last, and received by me before life was extinct. This individual combined in colour Mr. Jenyns's descriptions of *S. lævis* and *S. Hinnulus*, having, as the former is described, the "upper parts of a uniform pearl gray," and being "paler or almost white beneath;" at the same time

\* *Faune Française*, p. 83, pl. 20, f. 2.

presenting with the *S. Hinnulus*\* “a row of small whitish spots from the eye towards the first of the branchial openings; lateral line *indistinctly*? spotted with white; also a moderate number of small scattered white spots between the lateral line and the dorsal ridge.” The lateral line is in my specimen closely spotted with white, of a silvery lustre, from its origin to the extremity of the second dorsal fin, where this marking terminates; but a row of similar spots appears throughout the entire tail, beginning at the origin of the caudal fin on the upper side, and placed between its margin and the lateral line; “a moderate number” of white spots, as described above this line, as far as the extremity of the second dorsal fin; these are larger than those on the line and have the same silvery lustre; the short space intervening between the end of the second dorsal and the origin of the caudal fin is spotless. No spots on the body below the lateral line, nor on any of the fins, which are pearl grey; the pectorals varied with a whitish tinge along the margin, and the first dorsal with a dusky tip. Pupil of the eye black; irides silvery, with iridescent hues; eye 10 lines in length†, oblong-oval in form. This individual agrees in every character with the *M. stellatus* as described by Risso ‡, ‘Hist. Nat. l’ Eur. Merid.’, t. iii. p. 126. Mr. Yarrell’s figure of *M. lævis* (vol. ii. p. 393) is a very good representation of this fish. The present individual differs from it in having a close row of spots along the lateral line, and both lobes at the base of the caudal fin conspicuously displayed, the anterior one nearly as much so as in the preceding figure of *Galeus vulgaris* in the same work.

The specimen under description is a female. The stomach was filled with brachyurous crustacea, including a perfect and full-grown *Corystes Cassivelaunus*.

Other specimens of *Mustelus lævis* that I have examined, and which were about the same size as the one described, were similar in the characters above given; this is mentioned as showing that the white spots above the lateral line are not peculiar to the young fish. See Yarrell, B. F., vol. ii. p. 394.

\* “Brownish-ash” is given as the general colour by Mr. Jenyns; Risso describes the *M. stellatus* to be “d’un gris de perle en dessus.”

† The *Squalus Canicula* is so different in this respect, as from the smallness of its eyes to be commonly called *blind dog-fish* in the north of Ireland.

‡ The figure of *S. Hinnulus* in the ‘Faune Française’ shows the identity. *Ann. Nat. Hist.* Vol. 2, No. 10, Dec. 1838. T

XXXII.—*On the Wild Cattle of Chillingham Park.* By L. HINDMARSH, Esq., of Alnwick\*.

THE history of every country is one of change. This applies not only to man and his social relations, but to everything animate and inanimate. In some localities the sea has become dry land; in others, the soil which once flourished with vegetation has become the bed of the ocean. Sterile wastes have been transmuted into fertile plains, and dense forests into cultivated fields; and many of those animals which once roamed through them in ferocious independence are swept away, and are only found in those historic records which nature has preserved in her great museum of fossil remains. The rapid progress of population and culture has accelerated the depopulation of wild animals, and within a period not very remote, has rid this country of many of its ferocious inhabitants. Bears, which formerly infested this island, were extirpated at a comparatively early period; yet there is evidence of their existence in Scotland so late as the year 1057, when a Gordon, in reward for his prowess in killing one, was directed by the king to carry three bears' heads upon his banner. After them the wild boar and wolf were finally exterminated. Of the latter, one was however destroyed in Scotland so late as 1680, and in Ireland some were found even so far down as 1710. Of the wild ox it is probable that one remnant at least survives in the wild cattle of Chillingham Park, Northumberland, the property of the Earl of Tankerville. Their origin, character, and habits form the subject of the present inquiry.

In promotion of this object we have been most obligingly favoured by their present noble and accomplished proprietor with the following very interesting account of them, which needs no further preface to its introduction in this place. The following is an exact copy.

“ Sir,

“ Grosvenor Square, June 8, 1838.

“ Some time since I promised to put down upon paper whatever I knew as to the origin, or thought most deserving of notice in respect to the habits and peculiarities of the wild cattle at Chillingham. I now proceed to redeem my promise, begging your pardon for the delay.

\* Read before the late Meeting of the British Association at Newcastle, and communicated by the Author.

“ In the first place I must premise that our information as to their origin is very scanty. All that we know or believe in respect to it rests in great measure on conjecture, supported, however, by certain facts and reasonings which lead us to believe in their ancient origin, not so much from any direct evidence, as from the improbability of any hypothesis ascribing to them a more recent date. I remember an old gardener of the name of Moscrop, who died many years ago, at the age of perhaps 80 or more, who used to tell of what his father had told him as happening to him when a boy, relative to these wild cattle, which were then spoken of as wild cattle, and with the same sort of curiosity as exists with respect to them at the present day.

“ In my father and grandfather’s time we know that the same obscurity as to their origin prevailed ; and if we suppose (as no doubt was the case) that there were old persons in their time capable of carrying back their recollections to the generation still antecedent to them, this enables us at once to look back to a pretty considerable period, during which no greater knowledge existed as to their origin than at the present time. It is fair, however, to say, that I know of no document in which they are mentioned at any early period. Any reasoning, however, that might be built on their not being so noticed would equally apply to the want of evidence of that which would be more easily remembered or recollected,—the fact of their recent introduction.

“ The probability is that they were the ancient breed of the island, inclosed long since within the boundary of the park.

“ Sir Walter Scott, rather poetically, supposes that they are the descendants of those which inhabited the great Caledonian forest extending from the Tweed to Glasgow, at the two extremities of which, namely at Chillingham and Hamilton, they are found. His lines in the ballad ‘ Cadyon Castle,’ describe them pretty accurately at the present day :

‘ Mightiest of all the beasts of chase,  
That roam in woody Caledon,  
Crushing the forest in his race,  
The mountain bull comes thundering on.  
‘ Fierce on the hunter’s quiver’d band  
He rolls his eye of swarthy glow,  
Spurns with black hoof and horns the sand,  
And tosses high his mane of snow.’

I must observe, however, that those of Hamilton, if ever they were of the same breed, have much degenerated.

“ The park of Chillingham is a very ancient one. By a copy of